[0048] What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A micro-lens array, comprising:

a first set of micro-lenses comprising a plurality of first micro-lenses each having a first size; and

a second set of micro-lenses comprising a plurality of second micro-lenses each having a second size;

wherein at least one of said plurality of first micro-lenses at least abuts at least one of said plurality of second micro-lenses.

2. The micro-lens array of claim 1, further comprising a third set of micro-lenses comprising a plurality of third micro-lenses each having a third size.

3. The micro-lens array of claim 2, wherein said first, second, and third sizes are equal to each other.

4. The micro-lens array of claim 1, wherein a focal length of each of said plurality of first micro-lenses is approximately equal to a focal length of each of said plurality of second micro-lenses.

5. The micro-lens array of claim 1, wherein a focal length of each of said plurality of first micro-lenses corresponds to a first wavelength of light, and wherein a focal length of each of said plurality of second micro-lenses corresponds to a second wavelength of light.

6. A micro-lens array, comprising:

a first set of micro-lenses comprising a plurality of first micro-lenses;

a second set of micro-lenses comprising a plurality of second micro-lenses; and

a third set of micro-lenses comprising a plurality of third micro-lenses;

wherein said first micro-lenses at least abut said second and third micro-lenses.

7. The micro-lens array of claim 6, wherein said first micro-lenses have a first size and said second micro-lenses have a second size, said second size being no smaller than said first size.

8. The micro-lens array of claim 6, wherein said first, second, and third micro-lenses each have approximately a same focal length.

9. The micro-lens array of claim 6, wherein a focal length of each of said plurality of first micro-lenses corresponds to a first wavelength of light, wherein a focal length of each of said plurality of second micro-lenses corresponds to a second wavelength of light, and wherein a focal length of each of said plurality of third micro-lenses corresponds to a third wavelength of light.

10. The micro-lens array of claim 6, wherein a respective one of said second micro-lenses overlaps surrounding ones of said first micro-lenses.

11. The micro-lens array of claim 6, wherein said first, second and third sizes are equal to each other.

12. A micro-lens array, comprising:

a first set of micro-lenses comprising a plurality of first micro-lenses; and

a second set of micro-lenses comprising a plurality of second micro-lenses;

wherein said first micro-lenses exhibit different optical transmission properties than said second micro-lenses.

13. The micro-lens array of claim 12, comprising a third set of micro-lenses comprising a plurality of third micro-lenses.

14. The micro-lens array of claim 13, wherein said third micro-lenses exhibit different optical transmission properties than at least one of said first and second micro-lenses.

15. The micro-lens array of claim 14, wherein said third micro-lenses exhibit different optical transmission properties than both said first and second micro-lenses.

16. The micro-lens array of claim 13, wherein said first micro-lenses abut said second and third micro-lenses.

17. A semiconductor-based imager, comprising:

a pixel array having embedded pixel cells, each with a photosensor; and

a micro-lens array, comprising:

a first set of micro-lenses comprising a plurality of first micro-lenses each having a first size; and

a second set of micro-lenses comprising a plurality of second micro-lenses each having a second size;

wherein the micro-lens array is at least approximately space-less between at least one of said plurality of first micro-lenses and at least one of said plurality of second micro-lenses.

18. The semiconductor-based imager of claim 17, wherein said first size is different than said second size such that pixel cells corresponding to said second micro-lenses receive a greater amount of light than pixel cells corresponding to said first micro-lenses.

19. The semiconductor-based imager of claim 18, wherein said first micro-lenses correspond to green pixel cells, and wherein said second micro-lenses correspond to red and/or blue pixel cells.

20. The semiconductor-based imager of claim 17, wherein said micro-lens array further comprises a third set of micro-lenses comprising a plurality of third micro-lenses each having a third size.

21. The semiconductor-based imager of claim 20, wherein the micro-lens array is at least approximately space-less between said pluralities of first, second, and third micro-lenses.

22. The semiconductor-based imager of claim 20, wherein a focal length of each of said plurality of first micro-lenses is equal to a focal length of each of said plurality of second micro-lenses and a focal length of each of said plurality of third micro-lenses.

23. The semiconductor-based imager of claim 20, wherein focal lengths of each of the pluralities of first, second, and third micro-lenses are adjusted for a specific color signal.

24. A semiconductor-based imager, comprising:

a substrate having pixel cells formed thereon, each with a photosensor; and

a micro-lens array, comprising:

a first plurality of first micro-lenses each having a first size; and

a second plurality of second micro-lenses each having a second size larger than said first size;

wherein said second micro-lenses are adapted to collect a greater amount of light than said first micro-lenses.

25. The semiconductor-based imager of claim 24, wherein said first and said second micro-lenses each exhibit a similar focal length.

26. The semiconductor-based imager of claim 25, wherein said focal length extends to said photosensors.

27. The semiconductor-based imager of claim 24, wherein a focal length of the plurality of first micro-lenses is adjusted for a first color signal, and wherein a focal length of the plurality of second micro-lenses is adjusted for a second color signal.

28. The semiconductor-based imager of claim 24, wherein at least one of said second micro-lenses abuts at least one of said first micro-lenses.

29. The semiconductor-based imager of claim 24, wherein a respective one of said second micro-lenses overlaps surrounding ones of said first micro-lenses.

30. The semiconductor-based imager of claim 24, further comprising a color filter array positioned over said pixel cells.

31. The semiconductor-based imager of claim 30, wherein said color filter array is positioned between said micro-lens array and said wafer.

32. The semiconductor-based imager of claim 24, further comprising a light shield positioned between said micro-lens array and said wafer.

33. The semiconductor-based imager of claim 24, wherein said micro-lens array further comprises a third plurality of third micro-lenses each having a third size.

34. The semiconductor-based imager of claim 33, wherein said first, second, and third sizes are equal.

35. The semiconductor-based imager of claim 33, wherein at least one of said first micro-lenses abuts at least one of said second micro-lenses and at least one of said third micro-lenses.

36. A semiconductor-based imager, comprising:

a substrate having pixel cells formed thereon, each with a photosensor; and

a micro-lens array, comprising:

a first set of micro-lenses comprising a plurality of first micro-lenses each having a first size; and

a second set of micro-lenses comprising a plurality of second micro-lenses each having a second size no smaller than said first size;

wherein said second micro-lenses are each positioned in a space between adjacent said first micro-lenses such that said second micro-lenses contact said first micro-lenses.

37. The semiconductor-based imager of claim 36, further comprising a color filter array positioned over said pixel cells.

38. The semiconductor-based imager of claim 37, wherein said color filter array is positioned between said micro-lens array and said wafer.

39. The semiconductor-based imager of claim 36, wherein said second size is larger than said first size.

40. The semiconductor-based imager of claim 36, wherein said first and said second micro-lenses each exhibit a similar focal length.

41. The semiconductor-based imager of claim 40, wherein said focal length extends to said photosensors.

42. The semiconductor-based imager of claim 36, wherein a focal length of the plurality of first micro-lenses is adjusted for a first color signal, and wherein a focal length of the plurality of second micro-lenses is adjusted for a second color signal.

43. The semiconductor-based imager of claim 36, wherein a respective one of said second micro-lenses overlaps surrounding ones of said first micro-lenses.

44. The semiconductor-based imager of claim 36, wherein said micro-lens array further comprises a third plurality of third micro-lenses each having a third size.

45. The semiconductor-based imager of claim 44, wherein said first, second, and third sizes are equal.

46. A method of forming a micro-lens array, comprising:

patterning a first set of micro-lens material onto a substrate;

reflowing the first set of micro-lens material under first reflow conditions;

curing the first set of micro-lens material to form a first set of micro-lenses including a plurality of first micro-lenses;

patterning a second set of micro-lens material onto the substrate;

reflowing the second set of micro-lens material; and

curing the second set of micro-lens material to form a second set of micro-lenses including a plurality of second micro-lenses;

wherein the second micro-lenses are each positioned in a space among the first micro-lenses.

47. The method of claim 46, wherein said reflowing the second set of micro-lens material comprises reflowing the second set of micro-lens material under reflow conditions which are different than said first reflow conditions.

48. The method of claim 47, wherein said first and second reflow conditions are chosen to create a focal length in said first micro-lenses substantially equal to a focal length in said second micro-lenses.

49. The method of claim 47, wherein said first and second reflow conditions are chosen to create a focal length in said first micro-lenses corresponding to a first wavelength of light and to create a focal length in said second micro-lenses corresponding to a second wavelength of light.

50. The method of claim 46, wherein said patterning a first set of micro-lens material comprises patterning the first set of micro-lens material into a first plurality of portions arranged in a checkerboard pattern, the checkerboard pattern including spaces between said portions.

51. The method of claim 50, wherein said patterning a second set of micro-lens material comprises patterning the second set of micro-lens material into a second plurality of portions in a complementary checkerboard pattern filling in said spaces between the plurality of portions of the first set of micro-lens material.

52. The method of claim 51, wherein said patterning a second set of micro-lens material comprises patterning the second set of micro-lens material overlapping said first micro-lenses.

53. The method of claim 51, wherein said second plurality of portions comprise portions having a size no smaller than the size of the portions in the first plurality of patterns.

54. The method of claim 46, further comprising:

patterning a third set of micro-lens material onto the substrate;

reflowing the third set of micro-lens material; and

curing the third set of micro-lens material to form a third set of micro-lenses including a plurality of third micro-lenses.

55. The method of claim 54, wherein the patternings and reflow conditions of said first set, second set, and third set of micro-lens material create a micro-lens array having at least approximately no space between adjacent micro-lenses.